Amendment Dated March 9, 2007
Serial No. 10/609,290

REMARKS

Reconsideration of the rejection set forth in the Office Action is respectfully requested. By this amendment, new claim 55 has been submitted. Currently, claims 1-3, 49-51, and 53-55 are pending in this application.

Rejection under 35 USC 103

Claims 1-3 and 54 were rejected under 35 USC 103 as unpatentable over Alexander, Jr. (U.S. Patent No. 6,452,921) in view of Callon (U.S. Patent No. 5,583,862). This rejection is respectfully traversed in view of the amendments to the claims and the following arguments.

This application is focused on how two edge forwarders, or other network elements on opposite sides of a connection, may distinguish traffic that belongs to different VPNs on the connection. The starting point is an assumption that it is possible to establish a shortcut VCC through the MPOA/NHRP network. The issue being addressed is how to enable that shortcut VCC to be used by multiple VPNs.

Alexander teaches a way of establishing a shortcut connection in a NHRP/MPOA network, but doesn't address how to distinguish traffic from different VPNs on the connection so that a given shortcut is able to be used by multiple VPNs. The Examiner appears to have agreed with this position since the Examiner acknowledges that Alexander does not disclose the feature of in-band signaling on the connection to identify virtual private networks assigned to the connection. However, the Examiner has taken the position that using in-band signaling to identify VPNs assigned to a connection was well known in the art, citing Callon as support for this position.

Applicants respectfully submit that Callon does not teach "in-band" signaling of "VPNs assigned to a connection." Callon describes at col. 5, lines 10-35, a situation in which traditional routing protocols may operate inefficiently. Specifically, Callon explains a perceived inefficiency in the query / response approach taken by the Next Hop Resolution Protocol. Id. To overcome this perceived inefficiency, Callon proposes a way to use link state advertisements to indicate whether the adjacent routers identified in the link state advertisement are physically attached or not. (See Callon at col. 5, line 62 to col. 6, line 5). If the router advertises that a route is directly attached, future packets may be sent directly to the router. (See Callon at col. 6,

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lines 32-40). For "address served" routes, the advertising router may be queried to determine the physical address where the packet should be sent. (See Callon at col. 6, lines 49-56).

Callon therefore does not teach "in-band" signaling "on a connection" of VPNs "assigned to the connection" as claimed. Rather, Callon teaches the use of link state advertisements that contain an indication as to whether or not a particular address is directly attached (i.e. physically attached). These link state advertisements are not "in-band" "on a connection" since they are broadcast advertisements that are broadcast within the routing domain. Moreover, the link state advertisements of Callon do not contain an indication of "VPNs assigned to the connection." Rather, Callon's link state advertisements enable the other routers to learn which routes are physically connected to particular router so that the query/response process specified in NHRP is not required to be performed in connection with those routes. Thus, the indication described in Callon is not related to VPNs assigned to a connection.

The Examiner has taken the position that Callon teaches in-band signaling on a connection to identify virtual private networks assigned to the connection for virtual network routing. As support for this position, the Examiner cited Col. 4, lines 29-38, col. 5, lines 10-35, and col. 5, line 52-col. 6, line 7. Applicants respectfully submit that these portions of Callon do not teach or suggest "in-band" signaling "on a connection", or signaling that may be used to identify VPNs assigned to the connection. Rather, as described above, Callon teaches a way of using link state advertisements to indicate which routes, reachable through the router, are directly connected to the router or are address served through the router.

Claim 1 recites a method including the steps of establishing a connection in a MPOA/NHRP communication system; and using in-band signaling on the connection to identify Virtual Private Networks assigned to the connection. The link state advertisements of Callon are not "in-band" on a connection, since they are required to be broadcast to all routers on the network. Additionally, the link state advertisements of Callon do not "identify Virtual Private Networks assigned to a connection" because they only identify which IP addresses are physically attached to a particular router. This has nothing to do with whether a VPN is assigned to a connection on the network but only indicates whether a particular address is physically or logically attached to a particular router. Thus, even if Callon were to be combined with Alexander, the combination would not meet all the limitations of the claims.

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Moreover, applicants respectfully submit that it would not have been obvious to combine Alexander and Callon. Specifically, although Callon mentions NHRP as a protocol that is being used on IP networks, Callon states that there are inefficiencies in the protocol and, rather than suggest a way to improve NHRP, Callon teaches an alternative that may be used to avoid the use of NHRP for particular physically attached routes. Accordingly, Callon teaches away from using NHRP and a person would therefore not have been motivated to combine Callon with Alexander.

For the reasons set forth above, applicants respectfully request that the rejection of claims 1-3 and 54 be withdrawn.

Claims 49, 50, and 53 were rejected under 35 USC 103(a) as unpatentable over Brown (U.S. Patent No. 6,279,035) in view of Callon. Similarly, Claim 51 was rejected under 35 USC 103(a) as unpatentable over Brown in view of Callon and further in view of Allan (U.S. Patent No. 5,964,313).

Brown is assigned to Nortel Networks, the assignee of the current application, and qualifies as prior art to this application pursuant to 35 U.S.C. 102(e)(2) as "a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent." However, pursuant to 35 U.S.C. 103(c) "Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section [section 103] where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person."

According to MPEP 706.02(l)(3) (8th Ed. pp. 700-40 to 41) a commonly owned reference is disqualified where: (A) proper evidence is filed; (B) the reference only qualifies as prior art under 35 U.S.C. 102(e), (f), or (g) for applications filed on or after November 29, 1999, and (C) the reference was used in an obviousness rejection. All of these conditions exist in this instance. Accordingly, because this application and Brown were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person(s) or organization(s), Brown is improper for use in a 103 rejection against the claims of this application. Applicants therefore respectfully request that the rejection of claims 49, 50, and 53 over Brown in view of Callon, and the rejection of claim 51 over Brown in view of Callon and Allan, be withdrawn.

Additionally, Allan may not be cited against the claims of this application for the reasons set forth in the previous response filed August 17, 2006. Since Allan was previously removed as

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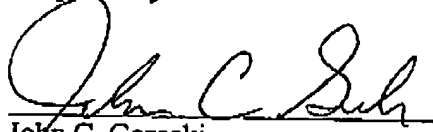
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a reference, and is no longer citable against the claims of this application, applicants respectfully submit that the Examiner has failed to provide a prima facie case of obviousness with respect to claim 51.

Conclusion

Applicants respectfully submit that the claims pending in this application are in condition for allowance and respectfully request an action to that effect. If the Examiner believes that a telephone interview would further prosecution of this application, the Examiner is respectfully requested to contact the undersigned at the number indicated below.

If any fees are due in connection with this filing, the Commissioner is hereby authorized to charge payment of the fees associated with this communication or credit any overpayment to Deposit Account No. 502246 (Ref. NN-BA0334C1).

Respectfully Submitted

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